

Remarks

Claims 1-33 were originally filed in this application. Claims 23-33 have been withdrawn from consideration as being drawn to a non-elected invention. Claims 1-22 remain in the application.

The Specification

The Specification is amended to include the cross reference to related applications for the current application.

The 35 USC §102 Rejections

Claims 1-12, 14 and 17-22 are rejected under 35 USC §102 (b) as being anticipated by Cote et al. (US Patent No. 5607593). This rejection is respectfully traversed and reconsideration is requested.

Claim 1, as amended, sets forth that gas is supplied through the through-openings in a **direction substantially perpendicular to a longitudinal axis of the membranes to provide cross flow gas distribution** for aerating the membranes within the membrane module. Such an arrangement provides for cross flow gas distribution which enhances scouring of fiber bundles thus reducing the accumulation of solids and inhibiting the blockage of fibers.

This is in contrast to the arrangement shown in Cote et al. Cote et al. shows a distribution network 15 having a pair of upstanding pipes which are spaced apart from the filtration modules 31 and a hood arrangement (see Fig. 9). It can be clearly seen that the upstanding pipes in Cote et al. **are oriented in a position parallel to the fiber bundles** (see Fig. 9). The ozone emitted by the pipes initially travels in a direction parallel to the longitudinal axis of the modules and is then guided towards the fiber bundles by an angled hood. In this arrangement, the gas is not directed in an orientation which is perpendicular to the fiber bundles. Therefore, the arrangement in Cote et al. does not provide cross flow gas distribution relative to the fibers as in the current invention.

As such, it is believed that independent claim 1, and dependent claims 2-10, are not anticipated by Cote et al. Independent claim 11 includes subject matter similar to

claim 1. Therefore, it is believed that claim 11 and dependent claims 12, 14 and 17-22 are also not anticipated.

The 35 §USC 103 Rejections

Claim 13 is rejected under 35 USC 103(a) as being unpatentable over Cote et al. (US Patent No. 5607593) as previously applied to claim 11 in view of Zha et al. (US Patent Pub. 20040217053A1). Claims 15 -16 are rejected under 35 USC 103(a) as being unpatentable over Cote et al. (US Patent No. 5607593) as previously applied to claim 11 in view of Watanabe (US Patent Pub. 20040045893A1). These rejections are respectfully traversed and reconsideration is requested.

Claim 11, as amended, sets forth that gas is supplied through the through-openings in a **direction substantially perpendicular to a longitudinal axis of the membranes to provide cross flow gas distribution** for aerating the membranes within the membrane module. Such an arrangement provides for cross flow gas distribution which enhances scouring of fiber bundles thus reducing the accumulation of solids and inhibiting the blockage of fibers.

The current invention discloses upper 18 and lower 19 through-openings which are arranged around the module circumference (see page 11, lines 8-14 and Fig. 3 of the specification as filed). This arrangement provides for cross flow gas distribution which enhances scouring of fiber bundles thus reducing the accumulation of solids and inhibiting the blockage of fibers.

By contrast, Cote et al. does not disclose or suggest through-openings that are arranged around the module circumference. Rather, Cote et al. shows a distribution network 15 having a pair of **upstanding pipes which are oriented in a position parallel to and spaced apart from** the filtration modules 31 and a hood arrangement (see Fig. 9). The ozone emitted by the pipes initially travels in a direction parallel to the longitudinal axis of the modules and is then guided towards the fiber bundles by an angled hood. In this arrangement, the gas is not directed in an orientation which is perpendicular to the fiber bundles. Therefore, the arrangement in Cote et al. does not provide cross flow gas distribution relative to the fibers as in the current invention.

Therefore, Cote et al. does not suggest Applicant's inventive device. Absent such suggestion, there would be no reason why one of ordinary skill in the art, who was faced with the same problems confronting the Applicant and who had no prior knowledge of Applicant's claimed structure, would consult Cote et al. alone or in combination with another patent to overcome the problems set forth in the patent application. Claims 13, 15 and 16 depend from claim 11. As such, it is believed that claims 13, 15 and 16 are not obvious.

Should the Examiner be of the view that an interview would expedite consideration of this Amendment or of the application at large, request is made that the Examiner telephone the applicant's attorney at (732) 321-3193 in order that any outstanding issues be resolved. The undersigned authorizes the charging of any fee deficiency that is due to Deposit Account No. 19-2179.

Respectfully submitted,



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